

REMARKS

The Official Action mailed January 24, 2008, has been received and its contents carefully noted. This response is filed within three months of the mailing date of the Official Action and therefore is believed to be timely without extension of time. Accordingly, the Applicant respectfully submits that this response is being timely filed.

The Applicant notes with appreciation the consideration of the Information Disclosure Statements filed on June 14, 2004; December 27, 2005; January 18, 2006; May 15, 2006; July 20, 2006; and January 2, 2008.

Claims 1-11 and 16-38 are pending in the present application, of which claims 1-10 and 28-30 are independent. (Although the Official Action states that claims 1-38 are pending in the present application, claims 12-15 were canceled without prejudice or disclaimer in the *Amendment* filed April 25, 2007.) Claims 1-10, 26, 29, 32 and 38 have been amended to better recite the features of the present invention. Claims 28-38 have been withdrawn from consideration. Accordingly, claims 1-11 and 16-27 are currently elected, of which claims 1-10 are independent. For the reasons set forth in detail below, all claims are believed to be in condition for allowance. Favorable reconsideration is requested.

Paragraph 4 of the Official Action rejects claims 1 and 3 under 35 U.S.C. § 112, second paragraph, regarding a lack of antecedent basis for "the interlayer insulating film." In response, claims 1 and 3 have been amended to remove "the interlayer insulating film" at line 13 and instead recite the following:

... a first insulating film and a second insulating film formed between a first semiconductor element and a second semiconductor element; a resin film is formed between and in contact with the first insulating film and the second insulating film; ... wherein the first semiconductor element and the second semiconductor element are stacked with the first insulating film, the second insulating film, and the resin film interposed therebetween,

The Applicant respectfully submits that the features of amended claims 1 and 3 are positively recited, and thus the claims are definite. Accordingly, reconsideration and

withdrawal of the rejections under 35 U.S.C. § 112 are in order and respectfully requested.

Paragraph 6 of the Official Action rejects claims 1, 3, 5, 7, 9, 11, 16-21 and 23-27 as anticipated by PCT Publication No. WO00/57489 to Shimoda. The Official Action apparently asserts that U.S. Patent No. 7,079,776 to Shimoda is the translation of Shimoda '489 (page 3, Paper No. 20080108). The Applicant respectfully submits that an anticipation rejection cannot be maintained against the independent claims of the present application, as amended.

As stated in MPEP § 2131, to establish an anticipation rejection, each and every element as set forth in the claim must be described either expressly or inherently in a single prior art reference. Verdegaal Bros. v. Union Oil Co. of California, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987).

Independent claims 1, 3, 5, 7 and 9 have been amended to recite "a first insulating film and a second insulating film formed between a first semiconductor element and a second semiconductor element;" and "a resin film formed between and in contact with the first insulating film and the second insulating film." These features are supported by the present specification, for example, by Figures 3A and 3B. For example, as shown in Figures 3A and 3B, an insulating film 523 (first identified in Figure 1D) and an insulating film over which a transistor is formed are interposed between the first semiconductor element and the second semiconductor element. For the reasons provided below, the Applicant respectfully submits that Shimoda does not teach the above-referenced features of the present invention, either explicitly or inherently.

The Official Action asserts that "Shimoda discloses ... a resin film (col. 3, lines 9-11, adhesive film between layers of 11-15 fig. 1; col. 6, line 67 - col. 7, line 5, adhesive disclosed to be resin) formed between the first semiconductor element and the second semiconductor element" (page 4, Paper No. 20080108). Also, the Official Action asserts that window T, made of glass, as shown in Figure 1 of Shimoda, corresponds

with the "interlayer insulating film" of the present claims (pages 4-5, *Id.*). The Applicant respectfully disagrees and traverses the assertions in the Official Action.

Shimoda might teach a "window T" interposed between resins. However, Shimoda fails to teach a second insulating film formed between the resin and the second semiconductor element. Therefore, the Applicant respectfully submits that Shimoda does not teach a first insulating film and a second insulating film formed between a first semiconductor element and a second semiconductor element; and a resin film formed between and in contact with the first insulating film and the second insulating film, either explicitly or inherently.

Since Shimoda does not teach all the elements of the independent claims, either explicitly or inherently, an anticipation rejection cannot be maintained. Accordingly, reconsideration and withdrawal of the rejections under 35 U.S.C. § 102 are in order and respectfully requested.

Paragraph 8 of the Official Action rejects claims 2, 4, 6, 8, 10, 11, 16-21 and 23-27 as obvious based on the combination of Shimoda and U.S. Patent No. 4,888,625 to Mueller. The Applicant respectfully submits that a *prima facie* case of obviousness cannot be maintained against the independent claims of the present application, as amended.

Initially, it is noted that the Official Action appears to generally rely on the combination of Shimoda and Mueller. Although the Official Action refers to "Ovshinsky" at page 6, line 23, based on the citations to Mueller at lines 20 and 26, it is believed that the Official Action intends to rely solely on Shimoda and Mueller to form the present rejection. If the Applicant's understanding of the present rejection is incorrect, the Applicant respectfully requests clarification in a future communication.

As stated in MPEP §§ 2142-2143.01, to establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some reason, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second,

there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. Obviousness can only be established by combining or modifying the teachings of the prior art to produce the present invention where there is some reason to do so found either explicitly or implicitly in the references themselves or in the knowledge generally available to one of ordinary skill in the art. "The test for an implicit showing is what the combined teachings, knowledge of one of ordinary skill in the art, and the nature of the problem to be solved as a whole would have suggested to those of ordinary skill in the art." In re Kotzab, 217 F.3d 1365, 1370, 55 USPQ2d 1313, 1317 (Fed. Cir. 2000). See also In re Fine, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988); In re Jones, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

The prior art, either alone or in combination, does not teach or suggest all the features of the independent claims, as amended. Independent claims 2, 4, 6 and 8 have been amended to recite "an insulating film formed between the first semiconductor element and the second semiconductor element" and that "the resin film is interposed between the insulating film and the metal oxide." These features are supported in the present specification, for example, by Figures 3A and 3B. Also, independent claim 10 has been amended to recite "a metal oxide partially formed in contact with either surface of each of the first thin film integrated circuit and the second thin film integrated circuit." For the reasons provided below, Shimoda and Mueller, either alone or in combination, do not teach or suggest the above-referenced features of the present invention.

The Official Action concedes that Shimoda does not teach "the interlayer insulating film to be a metal oxide" (page 6, Paper No. 22080108). The Official Action asserts that "Mueller teaches a stacked optoelectronic coupling element wherein a metal oxide is formed between the stacked elements" (Id.) and that "[i]t would have been obvious ... to use the metal oxide of Mueller as the insulating film in the optoelectronic device of [Shimoda]" (Id.). However, Shimoda and Mueller, either alone

or in combination, do not teach or suggest an insulating film formed between the first semiconductor element and the second semiconductor element and that the resin film is interposed between the insulating film and the metal oxide.

As noted above, claim 10 has been amended to recite a metal oxide partially formed in contact with either surface of each of the first thin film integrated circuit and the second thin film integrated circuit. If, as proposed in the Official Action, the metal oxide (coupling medium 3) of Mueller is used in place of the insulating film (window T) of Shimoda, it appears that Shimoda would also require that an adhesive layer 3 (Figure 4, allegedly corresponding with the resin film of the present claims) be formed between the metal oxide and the thin film integrated circuit. The Official Action appears to rely on the coupling medium 3 of Mueller to allegedly teach the metal oxide of the present claims (pages 6-7, Id.). Also, the Official Action appears to assert that it would have been obvious to use the metal oxide (coupling medium 3) of Mueller in place of the insulating film (window T) of Shimoda (Id.). Further, the Official Action appears to rely on the adhesive layer 3 of Shimoda to allegedly correspond with the resin film of the present claims (Id.). However, if the metal oxide (coupling medium 3) of Mueller is used as the insulating film of Shimoda, it appears that Shimoda would also require that the adhesive layer 3 be formed between the metal oxide and the thin film integrated circuit. Therefore, the Applicant respectfully submits that Shimoda and Mueller, either alone or in combination, do not teach or suggest a metal oxide partially formed in contact with either surface of each of the first thin film integrated circuit and the second thin film integrated circuit.

Since Shimoda and Mueller do not teach or suggest all the claim limitations, a *prima facie* case of obviousness cannot be maintained. Accordingly, reconsideration and withdrawal of the rejections under 35 U.S.C. § 103(a) are in order and respectfully requested.

Paragraph 9 of the Official Action rejects dependent claim 22 as obvious based on the combination of Shimoda and U.S. Patent No. 4,766,471 to Ovshinsky. Please

incorporate the arguments above with respect to the deficiencies in Shimoda. Ovshinsky does not cure the deficiencies in Shimoda. The Official Action relies on Ovshinsky to allegedly teach the features of the dependent claims. Specifically, the Official Action relies on Ovshinsky to allegedly teach that "the semiconductor layer of the thin-film transistors" should "be a crystallized semiconductor layer" (pages 7-8, Paper No. 20080108). However, Shimoda and Ovshinsky, either alone or in combination, do not teach or suggest the following features or that Shimoda should be modified to include any of the following features: a first insulating film and a second insulating film formed between a first semiconductor element and a second semiconductor element; and a resin film formed between and in contact with the first insulating film and the second insulating film. Since Shimoda and Ovshinsky do not teach or suggest all the claim limitations, a *prima facie* case of obviousness cannot be maintained. Accordingly, reconsideration and withdrawal of the rejections under 35 U.S.C. § 103(a) are in order and respectfully requested.

The Official Action appears to be incomplete. Specifically, it is noted that independent claims 1, 3, 5, 7 and 9 are rejected as anticipated by Shimoda, and that independent claims 2, 4, 6 and 8 are rejected on the basis of the alleged combination of Shimoda and Mueller. Claim 22 is rejected on the basis of the alleged combination of Shimoda and Ovshinsky. As such, the Official Action appears to address claim 22 as it depends from claims 1, 3, 5, 7 and 9. However, the Official Action does not appear to address claim 22 as it depends from claims 2, 4, 6 and 8. As such, the Applicant respectfully requests issuance of a new non-final Official Action or Notice of Allowability, as appropriate. For at least the reasons set forth above, the Applicant respectfully submits that claim 22 as it depends from claims 2, 4, 6 and 8 is in condition for allowance.

At this opportunity, the Applicant has amended withdrawn claims 29, 32 and 38 to correct minor informalities. Specifically, in claim 29, "the substrate" has been changed to "a substrate" to provide positive antecedent basis for the claim feature. In

claim 32, "the first light emitting element" has been changed to "the first light emitting device" for consistency. Claim 38 has been amended to depend from claim 28 or 29.

Should the Examiner believe that anything further would be desirable to place this application in better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number listed below.

Respectfully submitted,


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